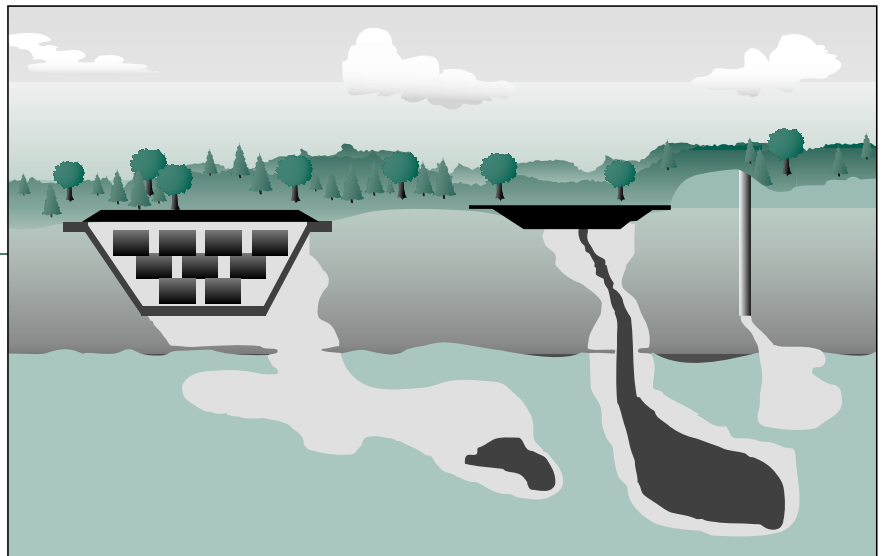




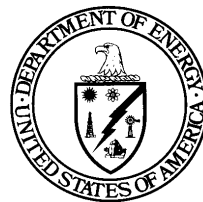
industry partnerships

providing innovative solutions

for environmental management problems



Office of Environmental Management
Office of Science and Technology



October 1999

EM'S INDUSTRIAL PARTNERS

Key: ▲ indicates deployment at one or more DOE sites. **Italics** indicate the vendor's name for the technology.

The Office of Science and Technology OST/TMS ID number [#] is used in the Technology Management System at <http://ost.em.doe.gov>.

ALABAMA

Bluegrass Concrete Cutting, Inc.
Greenville
Liquid-Nitrogen Cooled Diamond-Wire
Concrete Cutting [#2107]

ALASKA

AFI PermaFreeze
Anchorage
▲ Frozen Soil Barrier [#51]

ARIZONA

Burge Environmental
Tempe
Fiber Optic Probe/Sensor for
Trichloroethylene in Soil and Groundwater
[#466]

CALIFORNIA

Electronic Sensor Technology
Newbury Park
Surface Acoustic Wave/Gas
Chromatography System for Trace Vapor
Analysis [#282]

Geoprobe Systems, Western Regional Office

Reedley
▲ Compact Subsurface Investigation
System [#2153]

Integrated Water Technologies

Santa Barbara
▲ Dynamic Underground Stripping [#7]
▲ Electrical Resistance Tomography for
Subsurface Imaging [#17]
▲ Hydrous Pyrolysis/Oxidation [#1519]

Membrane Technology and Research, Inc.

Menlo Park
Test Beds for Process Testing (*VaporSep
Technology for VOC Recovery*) [#176]

Petrogen International, Ltd.

San Leandro
▲ Oxy-Gasoline *Cutting Torch* [#1847]

Quantrad Sensor, Inc.

Santa Clara
X-Ray Fluorescence Metal Analyzer [#2001]

ResonantSonic International

Woodland
▲ ResonantSonic Drilling [#55]

Science Applications International Corporation (SAIC)

San Diego
▲ Wireless Remote Radiation Monitoring
System (WRRMS) [#2104]

SteamTech Environmental Services, Inc.

Bakersfield
▲ Dynamic Underground Stripping [#7]
▲ Hydrous Pyrolysis/Oxidation [#1519]

Tri Tool, Inc.

Rancho Cordova
▲ High Speed Clamshell Pipe Cutter [#1807]

Weiss Associates

Emeryville
Lasagna [#4]

COLORADO

ADA Technologies

Englewood
Recovery of Mercury (*Stabilization of
Mercury-Containing Waste*) [#1703]

AquaVision

Palisade
▲ Colloidal Borescope [#465]

Boulder Scientific

Mead
Cesium Removal by Resorcinol-
Formaldehyde [#2006]

EarthWatch, Inc.

Longmont
Remote Sensing Systems Development
and Applications [#208]

KeveX Spectrace

Fort Collins
Portable X-Ray Fluorescence Spectrometer
(*Analyzer*) [#1790]

R.T. Reiman

Niwot
Gamma-Ray Spectrometer [#626]

CONNECTICUT

Canberra Industries

Meriden
▲ In Situ Object Counting System [#2098]

CS Unitec, Inc.

Wilton
▲ Concrete Grinder [#2102]

Radiological Services, Inc.

New London
▲ Pipe Crawler Internal Piping
Characterization System [#1810]

FLORIDA

Coleman Research Corporation

Orlando
Ground Penetrating Radar [#1148]

Delta Thermal, Inc.

Pensacola
▲ Out of Tank Evaporator (Mobile
Evaporator) [#20]

Life Sciences, Inc.

St. Petersburg
Miniaturized Chemical Flow Probe Sensor
Development (*Food & Water Borne
Pathogen Detectors & Sensors*) [#218]

GEORGIA

Durham Geo Enterprises, Inc.

Stone Mountain
▲ Passive Soil Vapor Extraction (Barometric
Pumping) [#56]

ITT Flygt Corporation

Suwanee
▲ Flygt Mixer [#2232]

Shonka Research Associates

Marietta
▲ Position Sensitive Radiation Monitoring
(Surface Contamination Monitor) [#1942]

IDAHO

Peak Technology, Inc.

Boise
Two Dimensional (2-D) Bar Code [#1365]

Sage Earth Science

Idaho Falls
▲ Rapid Geophysical Surveyor [#1995]

Science Applications International Corporation (SAIC)

Idaho Falls
Plasma Hearth Process [#26]

ILLINOIS

Argonne National Laboratory

Argonne
▲ Expedited Site Characterization [#77]

Bladon International, Inc.

Oak Brook
Cone Penetrometer Testing Lysimeter
(*Bladon Direct Push Lysimeter*) [#2365]

WITCO, a division of Bio-Imaging Research

Lincolnshire
Nondestructive Waste Assay Using
Gamma-Ray Active and Passive
Computed Tomography [#2123]
▲ Waste Inspection Tomography (WIT)
[#259]

INDIANA

Vector Technologies, Inc.

Fort Wayne
▲ VecLoader HEPA Vacuum Insulation
Removal [#1784]

LOUISIANA

G/O Corp.

Slidell
NuFab Anti Contamination Suit [#1855]

MARYLAND

ARD Environmental, Inc.

Laurel
In-Tank Waste Retrieval-Vehicle Based
System [#2012]

BAI Aerosystems, Inc.

Easton
▲ Remotely Piloted Vehicles (RPVs) and
Miniaturized Sensors [#76]

Engineering Computer Optecnomics

Annapolis

- ▲ Road Transportable Analytical Laboratory (RTAL) [#292]

GTS Duratek Corporation

Columbia

- ▲ Duramelter/Joule-Heated Melter [#58]

Rad Elec, Inc.

Frederick

- Electret Ion Chambers [#2315]

W.R. Grace and Company

Columbia

- In Situ Chemical Treatment of Asbestos [#73]

MASSACHUSETTS

Duane Equipment Corporation

Dorchester

- ▲ Remote Control Concrete Demolition System [#2100]

Geo-Centers, Inc.

Newton

- ▲ Magnetometer Towed Array (*Surface Towed Ordnance Locator System*) [#548]

InPhotonics, Inc., a subsidiary of EIC Laboratories, Inc.

Norwood

- ▲ Field Raman Spectrograph [#873]
- Raman Probe [#1544]

Niton Corporation

Bedford

- Alloy Analyzer [#2397]
- Lead Paint Analyzer [#2317]

MICHIGAN

GSI Lumonics

Livonia

- ▲ Laser Cutting and Size Reduction [#1477]

Mears/HDD, Inc

Rosebush

- ▲ Directional Drilling [#650]
- Recirculating Wells [#65]

Millgard Environmental Corporation

Livonia

- ▲ Deep Soil Mixing [#54]

MINNESOTA

3M

St. Paul

- ▲ Empore™ Membrane Separation Technology [#1543]
- ▲ Membrane-Supported Particle-Bound Ligands for Cesium Removal (*3M Empore™*) [#179]
- ▲ Rapid Sampling Using 3M Membrane Technology (*3M Empore™*) [#1514]
- Rotary Peening with Captive Shot [#1812]

MISSOURI

Monsanto Company

St. Louis

- Lasagna [#4]

PW Stephens Services, Inc./Concrete Cleaning, Inc.

St. Louis

- ▲ Centrifugal Shot Blasting [#1851]

MONTANA

MSE Technology Applications, Inc.

Butte

- Treatment Using Centrifugal Hearth Plasma Melter (*Plasma Waste Treatment*) [#1592]

NEW HAMPSHIRE

KAI Technologies, LLC

Portsmouth

- In Situ Radio Frequency Heating [#132]

NEW JERSEY

Everest VIT, Inc.

Flanders

- Piping Inspection (Remote Visual Inspection Using Specialty Cameras) [#1811]

GeoCleanse International, Inc.

Kenilworth

- Fenton's Reagent (*In-situ Chemical Oxidation*) [#2161]

Polyloxix Separation Technologies, Inc.

Dayton

- Water Soluble Chelating Polymers for Pu, Am Removal (*Polymer Filtration for Removal/Recovery of Heavy Metals*) [#35]

S2C2, Inc.

Warren

- ▲ Expedited Site Characterization [#77]

UOP, LLC

Mt. Laurel

- ▲ Cesium Removal Using Crystalline Silicotitanate [#21]

NEW MEXICO

Advanced Manufacturing Center

Las Cruces

- Multi-sensor Analysis Program for Environmental Restoration (MAPER) [#1861]

BNFL Instruments, Inc.

Los Alamos

- ▲ Decommissioning In-Situ Plutonium Inventory Monitor (DISPIM) [#2241]
- Gamma Ray Imaging System (*RadScan 700*) [#1793]
- Long Range Alpha Detection for Component Monitoring [#2382]

Daniel B. Stephens and Associates

Albuquerque

- ▲ Alternative Landfill Cover [#10]
- Dry Barrier Applications for Landfills [#605]

Eberline Instruments

Santa Fe

- ▲ Long Range Alpha Detector (LRAD) [#596]

Flexible Liner Underground Technologies, Ltd. (FLUTE, Ltd.)

Santa Fe

- ▲ SEAMIST (*Vadose FLUTE*) [#53]

HydroTechnics, Inc.

Albuquerque

- ▲ In Situ Permeable Flow Sensor [#99]

Science and Engineering Associates, Inc.

Albuquerque

- Barometrically Enhanced Remediation Technology (BERT™) [#2307]
- ▲ Passive Soil Vapor Extraction (Barometric Pumping) [#56]
- ▲ Pipe Explorer™ Surveying System [#74]

SenSolve, Inc.

Albuquerque

- Proximity Sensor System Development [#1631]

Stolar Horizon, Inc.

Raton

- Cross Borehole Electromagnetic Imaging (Logging of Toxic Waste Plumes) [#547]

SVS, Inc.

Albuquerque

- ▲ Automated Control System for Soil Vapor Extraction [#64]

NEW YORK

AIL Systems, Inc.

Deer Park

- ▲ Gamma Cam™ Radiation Imaging System [#1840]

AMETEK-Rotron Biofiltration Products

Saugerties

- Biocube [#1837]

Convolve

New York City

- ▲ Swing-Reduced Crane Control (*Anti-Sway Controls*) [#1815]

Foster-Miller Technologies (FMT)

Albany

- Interactive, Computer-Enhanced, Remote-Viewing System [#33]
- Small Pipe Characterization System (SPCS) [#43]
- ▲ Topographical Mapping System (TMS)/Laser Range Finder (LRF) [#130]

O'Brien & Gere

Syracuse

- Soda Blasting Decontamination Process (*Contam-Away™*) [#369]

NORTH CAROLINA

Container Products Corp.

Wilmington

- Steam Vacuum Cleaning (*Victory Decon System*) [#1780]

CORPEX Technologies, Inc.

Research Triangle Park

- CORPEX Nuclear Decontamination Process [#87]

Geophex, Ltd.

Raleigh

- Geophex Airborne Unmanned Survey System (GAUSS) [#295]

Troxler Electronic Laboratories

Research Triangle Park

- ▲ Advanced In Situ Moisture Logging System [#533]

NORTH DAKOTA

Dakota Technologies, Inc.

Fargo

▲ LIF Probe for CPT (*Direct Push*) [#2237]

OHIO

COGEMA, Inc.

Toledo

▲ Transportable Vitrification System (TVS) (*Waste-Vit® System*) [#222]

NUCON International

Columbus

VOCs Off-Gas Recovery/Recycle [#458]

Surface Technology Systems, Inc.

North Canton

Advanced Recyclable Media System [#1971]

Urethane Foam Specialists

Newcomerstown

Urethane Foam Void Filling [#1816]

OREGON

MINI MITTER

Sunriver

▲ Heat Stress Monitoring System (*VitalSense®*) [#1953]

PENNSYLVANIA

ABB Extrel

Pittsburgh

Secondary Ion-Mass Spectroscopy Analysis: Development and Evaluation [#135]

AEA Technology

Engineering Services, Inc.

Pittsburgh

Soft Media Blast Cleaning [#1899]

Delphinus Engineering

Eddystone

▲ System for Tracking Remediation, Exposure, Activities and Materials (STREAM) [#1947]

Electro-Pyrolysis, Inc.

Wayne

▲ Graphite Electrode DC Arc Furnace [#1652]

Mercury Recovery Services, Inc.

New Brighton

Removal and Recovery of Mercury from Mixed Wastes [#267]

Pentek, Inc.

Coraopolis

2-D Linear Motion System (*WallWalker Vertical Surface Locomotion*) [#1476]

▲ ROTO PEEN Scaler and VAC PAC System [#1943]

Remotely Operated Scabbling (*Moose Floor Scabblor*) [#2099]

RedZone Robotics, Inc.

Pittsburgh

▲ Houdini: Reconfigurable In Tank Mobile Robot [#98]

▲ Houdini-II Remotely Operated Vehicle System [#2085]

▲ Rosie: Mobile Teleoperated Robot Worksystem [#1799]

Rumsey Electric Company

Conshohocken

▲ Mobile Integrated Temporary Utility System [#1795]

Vortec Corporation

Collegeville

Treatment Using Centrifugal Hearth Plasma Melter (*Vitrification of Low-Level and Mixed Wastes*) [#1592]

Vortec Cyclone Melter System [#68]

SOUTH CAROLINA

Starmet CMI

Barnwell

▲ Stainless Steel Beneficial Reuse [#80]

Westinghouse Savannah River Co.

Aiken

In Situ Radio Frequency Heating [#132]

▲ Stainless Steel Beneficial Reuse [#80]

TENNESSEE

ABS Group, Inc.

Knoxville

Surveillance and Maintenance Risk and Cost Reduction Evaluation Methodologies [#185]

Frham Safety Products, Inc.

Nashville

FRHAM-TEX Anti Contamination Suit [#1854]

GTS Duratek

Oak Ridge

Decontamination of Process Equipment Using Four Technologies [#1594]

▲ SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal [#1595]

Manufacturing

Sciences Corporation

Oak Ridge

Decontamination and Conversion of Nickel Radioactive Scrap Metal [#234]

▲ Stainless Steel Beneficial Reuse [#80]

Microbial Insights, Inc.

Rockford

▲ Biomolecular Probe Analysis: Bioremediation Organisms (*Microbial Community Identification*) [#468]

Thermatrix Inc.

Knoxville

▲ Flameless Thermal Oxidation [#52]

TEXAS

Duke Engineering & Services

Austin

In Situ Decontamination of Aquifers by Surfactant Solubilization of DNAPLs (*Chemically Enhanced Solubilization for Aquifer Remediation - CESAR®*) [#297]

Fugro Geosciences

Houston

▲ LIF Probe for CPT [#2237]

Leak Location Services, Inc.

San Antonio

Electrical Resistance Tomography - Tanks [#140]

Oceaneering Space Systems

Houston

Robotic End Effector for Inspection and Sampling of Storage Tanks [#278]

TomoSeis, Inc.

Houston

▲ Cross-Well Seismic Imaging [#588]

UTAH

Envirocare of Utah, Inc.

Salt Lake City

Kinetic Mixer [#2160]

▲ Stabilized Contaminants using Envirocare Polymer Macroencapsulation [#30]

VERMONT

Applied Research Associates

South Royalton

HeavyWeight Cone Penetrometer [#489]

High Speed GC and Cone Penetration Techniques for Measuring Fuel Contamination [#283]

Innovative DNAPL Characterization Technologies [#237]

Miniature Pumps in the Cone Penetrometer Tip for Groundwater and Soil Sampling (Cone Sipper) [#381]

Tomographic Site Characterization Using CPT, ERT and GPR [#284]

R.O.V. Technologies, Inc.

Vernon

Remotely Operated Vehicle (ROV) System for Horizontal Tanks [#2086]

VIRGINIA

AEA Technology

Vienna

AEA Fluidic Pulse Jet Mixer [#1511]

Arctech, Inc.

Chantilly

Humasorb™, A Lignite Derived Humic Acid for Removal of Metals and Organics [#285]

Cybermotion

Roanoke

Intelligent Inspection and Survey Robot (*Aries, NavMaster® III*) [#272]

Lukas Rescue Team, Inc.

Fredricksburg

Self Contained (*Hydraulic*) Pipe Cutting Shear [#1948]

PCI

Arlington

Remote Sensing Systems Development and Applications [#208]

UTD, Inc.

Manassas

Innovative Directional and Position Specific Sampling Technique (POLO) (*Steerable Vibratory Penetrometer*) [#316]

WASHINGTON

Applied Geotechnical

Engineering & Construction, Inc.

Richland

▲ Passive Reactive Barrier [#46]

Subsurface Barrier Emplacement [#11]

Asbestos Recycling, Inc.

Kent

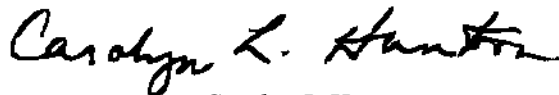
Thermal Conversion of Asbestos [#224]

Letter from the Assistant Secretary

Many businesses, in partnership with the Department of Energy, have developed and demonstrated improved technologies that address the needs of the DOE Environmental Management (EM) Program. These companies have made their products and services commercially available to help address EM's cleanup challenges.

DOE support helps many companies conduct applied research, development, demonstration, testing, and evaluation, enabling them to achieve earlier market entry than would be possible under exclusively company-funded development. In turn, as these technologies become available, many are now being deployed at multiple DOE sites to lower the costs associated with cleanup activities, reduce health and safety risks, and solve intractable problems.

For more information on EM's products and services, please visit us on the Web at <http://www.em.doe.gov>.



Carolyn L. Huntoon

Assistant Secretary for Environmental Management

BetaScint, Inc.

Kennewick

- ▲ BetaScint Fiber-Optic Sensor for Detecting Strontium-90 and Uranium-238 in Soil (and Groundwater) [#70]

COGEMA Engineering Corp.

Richland

- ▲ Cogema 3-D Gamma Imaging [#2302]

EDAX Portable Products Division

Kennewick

- X-Ray Fluorescence Spectroscopy for Heavy Metals (for All Metals) [#622]

Environmental Specialties Group, LLC

Richland

- In-Tank Waste Retrieval-Vehicle Based System [#2012]

Geosafe Corp.

Richland

- In Situ Vitrification Bottoms-up [#59]
- In Situ Vitrification - Top Down [#1750]

Integrated Environmental Technology, LLC

Richland

- ▲ Graphite Electrode DC Arc Furnace [#1652]

L.L. Safety West

Ritzville

- ▲ Sealed-Seam Sack Suit [#1954]

Master-Lee Hanford Corp.

Richland

- ▲ Reactor Surface Contaminant Long-Term (InstaCote®-ML) [#1839]

Pacific International Grout Company

Bellingham

- Low-Density Cellular Concrete Void Filling (Nuclear Decommissioning by Grouting) [#1846]

Pacific Northwest National Laboratory

Richland

- ▲ Graphite Electrode DC Arc Furnace [#1652]

Project Performance Corporation

Richland

- ▲ In Well Vapor Stripping [#6]

RedHawk American, Inc.

Richland

- ▲ Reactor Surface Contamination Long-Term [#1839]

Rowand Machinery

Pasco

- Concrete Dust Suppression System [#2154]

Soil Freeze Technologies, LLC

Redmond

- ▲ Frozen Soil Barrier (CRYOCELL®) [#51]

Thermo NUtech, Inc.

Kennewick

- ▲ Indoor Radiation Mapping Using Laser Assisted Ranging and Data System [#1946]

UFA Ventures

Richland

- ▲ Unsaturated Flow Apparatus (UFA) [#105]

Waterjet Technology, Inc.

Kent

- ▲ Borehole Miner [#1499]
- ▲ Confined Sluicing End Effector [#812]
- Lightweight Scarifier [#1500]
- Soft Waste Dislodging End Effector [#809]

WISCONSIN

Nicolet Instrument Corp.

Madison

- Raman Probe [#1544]

CANADA

Delta Temax, Inc.

Pembroke, Ontario

- ▲ Personal Ice Cooling System (PICS) (CORETECH Body Temperature Control System) [#1898]

EnviroMetal Technologies, Inc.

Waterloo, Ontario

- ▲ Passive Reactive Barrier [#46]

Inuktun Services, Ltd.

Cedar, British Columbia

- ▲ Internal Duct Characterization System [#42]

MacDonald Dettwiler Space and Advanced Robotics, Ltd.

Brampton, Ontario

- ▲ Light Duty Utility Arm [#85]

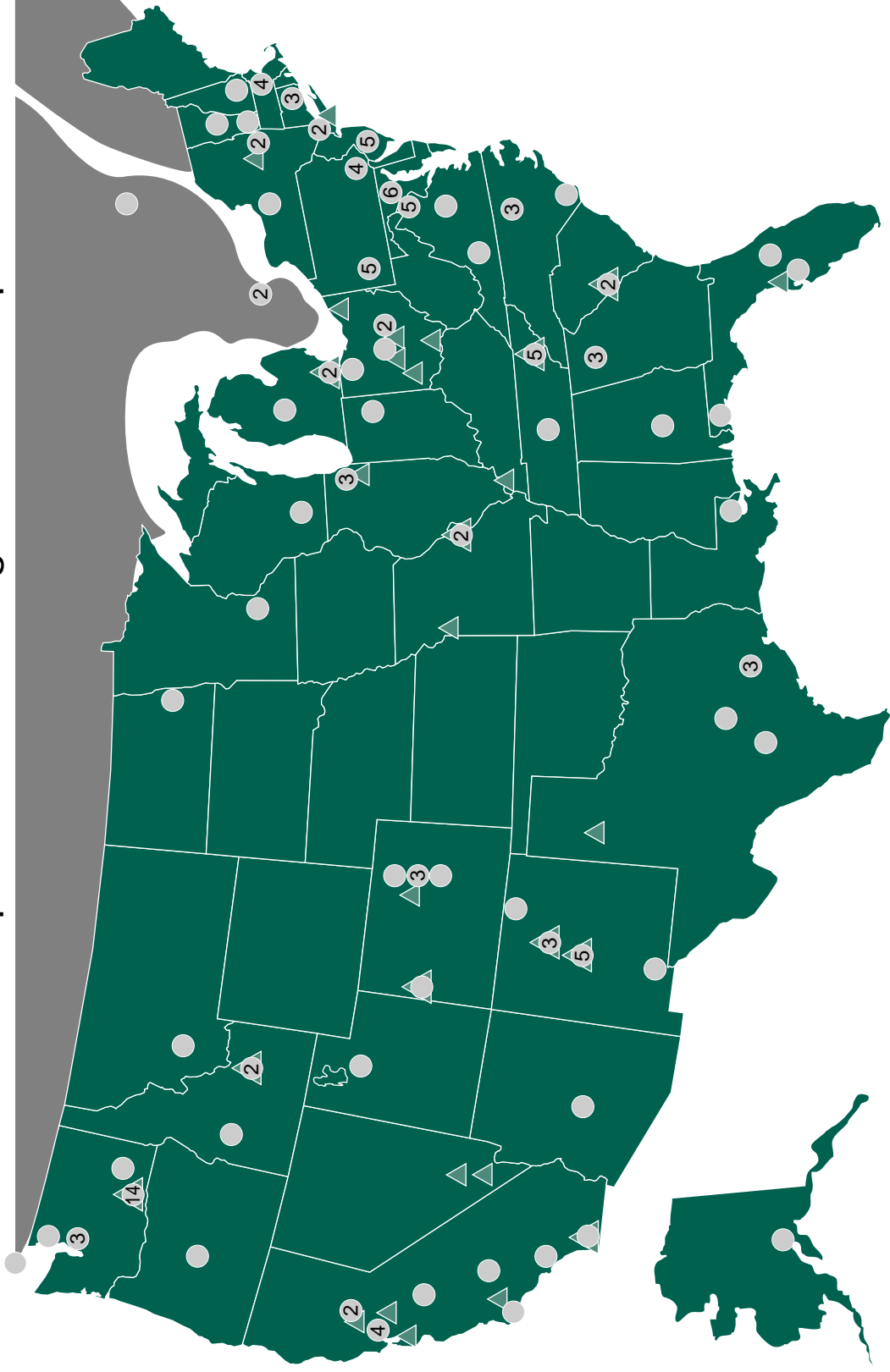
ENGLAND

Marcryst Industries Limited

South Yorkshire, Doncaster

- ▲ Concrete Shaver [#1950]

EM's industrial partners: solving a national problem



- - vendor site (numbers indicate multiple vendors in same location)
- ▲ - deployment site

October 1999